

BORESKOV, G.K.; VASILEVICH, L.A.; GUR'YANOVA, R.N.; KERNERMAN, V.Sh.;
SLIN'KO, M.G.; FILIPPOVA, A.G.; CHESNOKOV, B.B.

Oxidation of ethylene in a fluidized bed of a catalyst. Kin.i
kat. 3 no.2:214-220 Mr~Ap '62. (MIRA 15:11)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR i Fiziko-khimi-
cheskiy institut imeni L.Ya.Karpova.
(Ethylene) (Oxidation) (Fluidization)

8(6), 14(6)

SOV/112-59-4-6746

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 4, p 50 (USSR)

AUTHOR: Chesnokov, B. S.

TITLE: Mounting Embedded Parts by the Smooth-Joint Method

PERIODICAL: V sb.: Energ. str-vo, Nr 2, M.-L., 1958, pp 39-45

ABSTRACT: The problems associated with the mounting of gate embedded parts, advantages and disadvantages of both smooth- and dented-joint methods are considered. For the case of a smooth-joint placement, when the embedded parts cannot be reliably steadied, structures are suggested that permit adjusting the position of the embedded parts after concrete placing. A slot structure consisting of slabs with embedded parts adjusted after the concrete placing is described.

A.I.I.

Card 1/1

CHESNOKOV, B.S.

New cranes for the mechanization of building and installation operations. Energ.stroi. no.4:11-17 '58. (MIRA 12:2)

1. Moskovskaya kontora "Gidrostat'proyekt."
(Cranes, derricks, etc.)

Chesnokov, B. V.

Pegmatites

Comments on the article by V. D. Nikitin "Principle features in the origin of ceramic pegmatites of southern Karelia" (Records of the Mineralogical Society, 1949, No. 3).
Zap. Vses.min.ob. 81, No. 1, 1952

Monthly List of Russian Accessions, Library of Congress, July 1952, UNCLASSIFIED.

Chesnokov, B. V.

USSR/Solid State Physics - General Problems, E-1

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34555

Author: Chesnokov, B. V.

Institution: None

Title: On a Procedure for Sketching Microsections

Original Periodical: Mineralog. sb. L'vovsk. geol. o-va pri un-te, 1955, No 9,
284-285

Abstract: Description of a method for sketching microsections, and a diagram of a setup, by which the image of the microsection is projected with the aid of a MIN-2 microscope on paper. The setup makes it also possible to photograph the image, placing a photographic plate under the microscope.

CHESNOV, B.V.

An instance of interrelation of a granitic pegmatite and an aplite.
Zap.Vses.min.ob-va 84 no.1:82-85 '55. (MLRA 8:5)

1. Sverdlovskiy gorny institut im. V.V.Vakhrusheva, Kafedra mineralogii.

(Aplites) (Pegmatites)

CHESNOKOV, B.V.

Orientation of feldspar crystals on fissure walls of miaskite in the
Vishnevyye Hills in the Urals. Trudy Sver.gor.inst. no.26:109-113

'56.

(MLRA 10:3)

(Vishnevyye Hills--Feldspar crystals) (Nepheline syenite)

15-57-4-4575
Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4,
p 82 (USSR)

AUTHOR: Chesnokov, B. V.

TITLE: Crystals of Pyrrhotite From the Vishnevye Gory
(Mountains) in the Urals (Kristally pirrotina iz
Vishnevykh gor na Urale)

PERIODICAL: Tr. Sverd. gorn. in-ta, 1956, Nr 26, pp 113-115

ABSTRACT: In the Vishnevye Mountains of the Urals small pyrrho-
tite crystals have been found in districts where mia-
skites and aegirine-augite syenites have suffered
strong carbonate alteration. Most of the crystals are
tabular; the others are barrel-shaped. The following
crystallographic forms have been recognized: $c\{0001\}$
(predominant in the tabular variety), $m\{10\bar{1}0\}$, $t\{10\bar{1}4\}$,
 $S\{10\bar{1}2\}$, $r\{10\bar{1}1\}$, $u\{20\bar{2}1\}$, and $A\{5052\}$.

Card 1/1

Ye. S. Ye.

✓ Determination of the volume increase of a mineral by its metamict disintegration B. V. Chesnokov (V. V. Vakh-rushev Mining Inst., Sverdlovsk), *Zapiski Vostochno-Mineral. Obshchestva* 85, 580 (1952), 4 p. *Miner. ologist* 37, 137-57 (1952).—The metamict conversion of a mineral of the pyrochlore group is indicated by a very characteristic increase in vol. (measured at 25°), 34 and 35, and by strong neck, strands and other features of the surrounding minerals. Pyrochlore crystals are described as

occurring in a massive, irregular, and sometimes well-defined prismatic. The structure of the metamict mineral is indicated by the crystals, which are formed by typical radial marks, while in the case of the surrounding minerals, a great deformation is observed, indicated by a characteristic folding and displacement of the scaly mineral. The process of recryst. of the metamict pyrochlore is indicated by exothermic effects at 580-600°, and at 615-25° on the differential-thermal curves, combined with a considerable increase in d. in the recrystd. mineral. W. Eitel

CHESNOKOV, B.V.

Eclogites containing rutile in the Shubino deposit of the southern Ural. *Izv.vys.ucheb.zav.*; geol.1 razv. 2 no.4: 124-136 Ap '59. (MIRA 12:12)

1. Sverdlovskiy gornyy institut.
(Ural Mountains--Eclogites) (Ural Mountains--Rutile)

CHESNOKOV, B.V.

Spectral absorption by substances colored by trivalent titanium.
Izv. vys. ucheb. zav.; geol. i razv. 2 no.7:70-75 J1 '59 (MIRA 13:3)

1. Sverdlovskiy gornyy institut.
(Spectrophotometry) (Titanium)

CHESNOKOV, B.V.

Luminescence and internal structure of zircon crystals from the
Vishnevyye Mountains in Ural. Zap. Vses. min. ob-va 88 no.5:583-586
'59. (MIRA 13:2)

1.Kafedra mineralogii i kristallografii Sverdlovskogo gornogo instituta.
(Ural Mountains--Zircon crystals)

CHESNOKOV, B.V.

Luminescence of pyrochlore from the Vishnevyye Mountains in the
Urals. Zap. Vses. min. ob-va 89 no.1:96-98 '60. (MIRA 13:10)

1. Kafedra mineralogii i kristallografii Sverdlovskogo gornogo
instituta.

(Vishnevye Mountains—Pyrochlore)

CHESNOKOV, B.V., Dand Geo-Mineral Sci (russ) "Mineralogy of rutile
eclogites of the Shubinsk deposits in the southern Urals." Sverdlovsk,
1960, 16 pp (Sverdlovsk Mining Institute im V. V. Vakhrushev) (KL, 34-60, 121)

CHESNOKOV, B.V.

Changes in the composition of garnets during the metamorphism
of eclogites in the Southern Urals. Izv.AN SSSR.Ser.geol. 26
no.7:40-48 J1 '61. (MIRA 14:7)
(Ural Mountain region--Garnet) (Ural Mountain region--Eclogite)

CHESNOKOV, B.V.

Chevkinite crystals from Vishnevaya Mountain in the Urals. Zap.
Vses.min.ob-va 90 no.3:281-283 '61. (MIRA 14:10)

1. Kafedra mineralogii i kristallografii Sverdlovskogo gornogo
instituta.

(Ural Mountains--Chevkinite crystals)

~~CHESNOKOV, B.V.~~

Spectral absorption curves of the glaucophane from eclogites in
the Southern Urals. Zap.Vses.min.ob-va 90 no.6:700-703 '61.
(MIRA 15:2)

1. Kafedra mineralogii i kristallografii Sverdlovskogo gornogo
instituta.

(Ural Mountains--Eclogite) (Ural Mountains--Glaucophane)

CHESNOKOV, B.V.

New minerals from the Vishnevyye Mountains in the Urals.
Trudy Gor.-geol.inst. UFAN SSSR no.56:63-69 '61. (MIRA 15:7)
(Vishnevyye Mountains—Minerals)

CHESNOKOV, B.V., YEREMEYEV, S.P.

Decrystallization of metamict pyrochlore under natural conditions.
Dokl. AN SSSR 146 no.3:683-685 S '62. (MIRA 16;10)
(Pyrochlore)

CHESNOKOV, B.V.; YEREMEYEV, S.P.

Decrystallization of metamict pyrochlore under natural conditions.
Dokl. AN SSSR 146 no.3:683-685 S '62. (MIRA 15:10)

1. Severdlovskiy gornyy institut im. V.V.Vakhrusheva. Predstavleno
akademikom N.V.Belovym.
(Crystallization) (Metamict state) (Pyrochlore)

CHESNOKOV, B.V.

Nepheline syenite among glacial boulders in Kostroma Province.
Izv. AN SSSR. Ser.geol. 28 no.6:110-111 Je '63. (MIRA 16:8)

1. Sverdlovskiy gornyy institut imeni V.V.Vakhrusheva, Sverdlovsk.
(Kostroma Province--Nepheline syenite)

CHESNOKOV, B.V.

Structure of graphic granites. Zap. Vses. min. ob-va 92
no. 3:292-301 '63. (MIRA 17:9)

1. Kafedra mineralogii i kristallografii Sverdlovskogo gornogo
instituta.

CHESNOKOV, B.V.

Find of betafite in pegmatites of nepheline feldspathic composition. Zap. Vses. min. ob-va 93 no.1:73-74 '64

(MIRA 18:2)

1. Kafedra mineralogii i kristallografii Sverdlovskogo gornogo instituta.

CHESNOKOV, B.V.

Deformation of a metal rod in the mechanical twinning of
calcite crystals. Kristallografiia 10 no.2:258-259 Mr-Apr
'65. (MIRA 18:7)

1. Sverdlovskiy gornyy institut.

KAZAK, A.P.; CHESNOKOV, B.V.

Enstatite rocks from the development region of eclogite in
the Southern Urals. Trudy Inst. geol. UFAI SSSR no. 70:43-46
1965. (ITEA 16:12)

CHESNOKOV, D.

AID - P-47

Subject : USSR/Aeronautics
Card : 1/1
Author : Chesnokov, D., Lt. Col. Engineer
Title : Preservation of Aviation Wheels and Tires
Periodical : Vest. vozd. flota 3, 58 - 61, March 1954
Abstract : The author explains in short terms the mechanics of braking, and then advises flyers on the best methods of using brakes in landing. He stresses also the importance of inspection and maintenance. One diagram.
Institution: None
Submitted : No date

CHESNOKOV, D.A., inzhener-polkovnik

Stalling of the engine during flight. Vest.Vozd.Fl. no.5:62-66
My '60. (MIRA 13:7)
(Airplanes--Engines)

CHESNOKOV, D I

REF
.R93066

OBSHCHESTVENNO-POLITICHESKIYE I FILOSOFSKIYE VZGLYADY A. I. GERTSENA.
MOSKVA, IZD-VO ZNANIYE, 1953. 29 P. (VSESOYUZNOYE OBSHCHESTVO PO
RASPROSTRANENIYU POLITICHESKIKH I NAUCHNYKH SVERENIY. 1953, SERIYA 2, NO. 10)
BIBLIOGRAPHICAL FOOTNOTES.

CHESNOKOV, D.I.

Based on volunteers' work. Put' 1 put.khoz. 6 no.12:13 '62.
(MIRA 16:1)

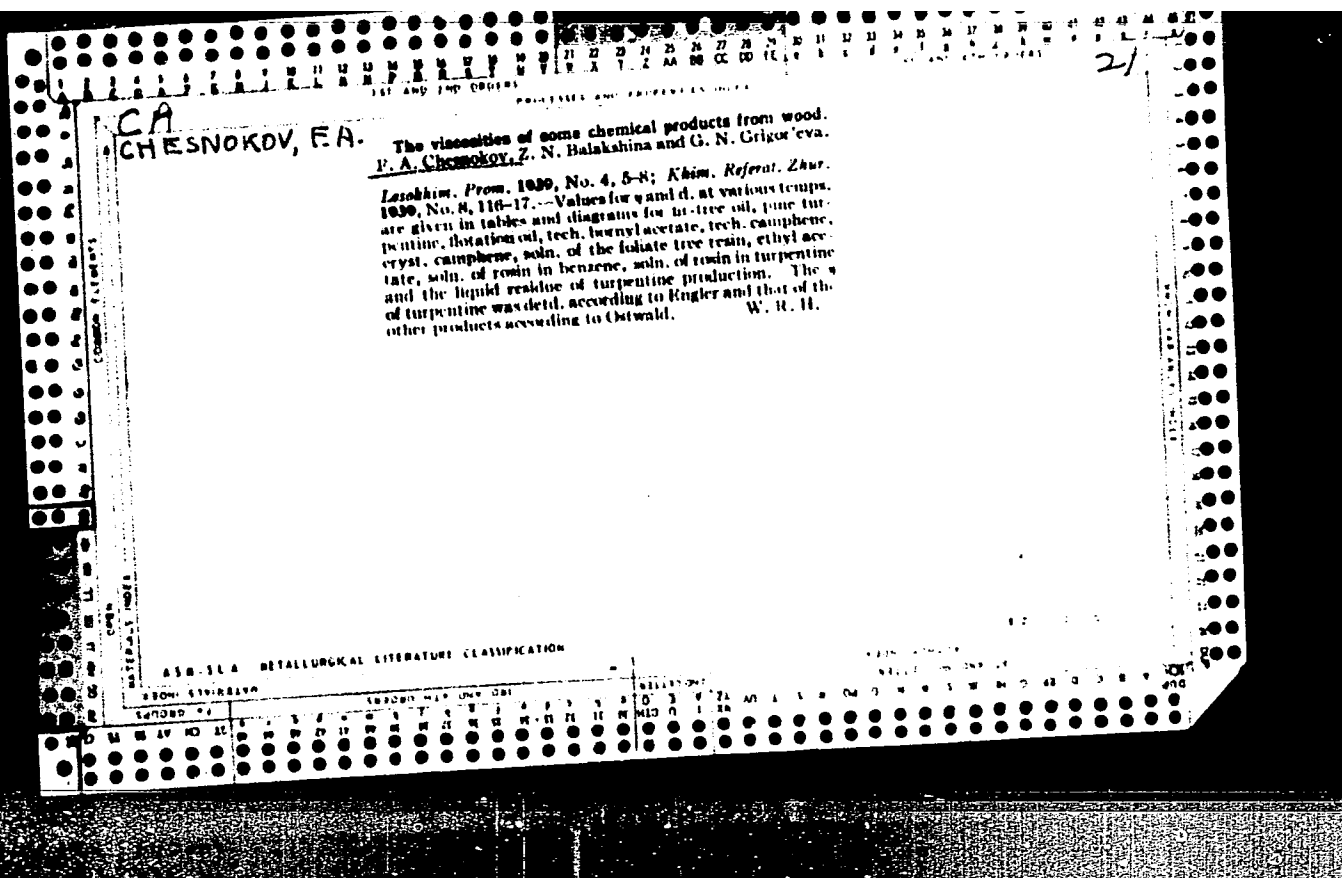
1. Chlen prezidiuma Dorozhnogo komiteta professional'nogo soyuza
rabotnikov zheleznodorozhnogo transporta, Vil'nyus.
(Lithuania--Railroads--Technological innovations)

VERTSMAN, G.Z., kand. tekhn. nauk; PANTELEYEV, P.I., kand. tekhn. nauk; GOMOLYAKO, I.M.; TAL', K.K.; GUSEVA, K.G.; LUGOVOY, P.A.; MASSAN, A.M.; GALKIN, N.V.; SAPRYGINA, G.M.; CHESNOKOV, D.S.; DROZDKOV, V.I.; IZYUMOV, P.S.; ZAK, B.O.; KOROGID, P.Ye.; MAKSIMOVICH, L.N.; ZBOROVSKAYA, M.I.; PAVLOVSKAYA, S.A.; BORISOV, A.V.; SELIVANETS, N.Ye.; ITKES, V.M.; YATSKEVICH, Ya.D.; KOZYRSKIY, N.P.; NIKITIN, V.D.; NEKLEPAYEVA, Z.A., inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Design and planning of railroad stations and junctions]
Proektirovanie zheleznodorozhnykh stantsii i uzlov; spravochnoe i metodicheskoe proizvodstvo. Moskva, Transzheldorizdat, 1963. 443 p. (MIRA 16:12)

1. Nauchno-issledovatel'skiy institut transportnogo stroitel'stva (for Guseva). 2. Gosudarstvennyy institut tekhniko-ekonomicheskikh izyskaniy i proyektirovaniya zheleznodorozhnogo transporta (for Zak). 3. Kiyevskiy gosudarstvennyy proyektno-izyskatel'skiy institut (for Kozyrskiy). 4. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta Im. I.V. Stalina (for Nikitin).

(Railroad engineering)



CHESNOKOV, F. A.

CA

24

Investigation of the limits of explosiveness of turpentine vapor-air mixture. F. A. Chesnokov. *Izvestiya Akad. Nauk SSSR, Khim. i Mekh. Tverdykh Tela*, No. 6, 1951, 1010. Tests were conducted with an electrically heated steel cylinder (188 cc) equipped with a spark plug for igniting the turpentine vapor-air mixt. and a valve for reducing the pressure to atm. Content of turpentine in the mixt. ranged from 0.0 to 4.0% by vol. The plug was sparked at temps. ranging up to 100° and with pressures at atm. or higher. The limits of explosiveness were 1.16-2.63% by vol. of turpentine in the mixt.; this compares with 1.1-2.2% by vol. calcd. on the basis of vol. of O required for complete combustion. In fat works, the explosive mixt. forms easily at the start of distn. while the air is not yet expelled. The drier the fat the slower will be the expulsion of the air and the greater the danger of the formation of an explosive mixt. Important safety measures are the blowing of steam through the mixt. at the start of the distn. or the addn. of water after the mixt. has been heated up. B. Z. K.

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND DEGREE		PROCESSING AND PROPERTIES INDEX		180 AND 4TH DEGREE																																							
CHEBYOKOV, E.A.				17																																							
CA																																											
Separation of camphene from the vapor-air mixture of the vacuum line in the production of camphor. P. A. Chebyokov, Arkhangel, Leningrad, Inst. im. V. I. Lenin, No. 6, 101-8 (in Russian).--In rectification of camphene (at 50°) under 180 mm., the outgoing air contains about 180 g. camphene per cu. m. Subsequent condensation at 20° permits recovery of about 70% of the camphene. About 80% of the balance can be recovered by absorption in solar oil, preferably freed from its volatile components (8%) by preliminary flushing with steam. With 0.2-0.5 kg. solar oil per cu. m. of air, 6-4 absorber plates are sufficient; with 2 kg. oil/cu. m., one plate is enough. In description, the expenditure of steam per 100 kg. solar oil, at 100, 120, 130 and 140°, is 100, 80, 40 and 30 kg., resp. Total recovery of camphene is about 94%. N. Thon																																											
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																																											
<table border="1"> <thead> <tr> <th>1800</th> <th>1700</th> <th>1600</th> <th>1500</th> <th>1400</th> <th>1300</th> <th>1200</th> <th>1100</th> <th>1000</th> <th>900</th> <th>800</th> <th>700</th> <th>600</th> <th>500</th> <th>400</th> <th>300</th> <th>200</th> <th>100</th> <th>0</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						1800	1700	1600	1500	1400	1300	1200	1100	1000	900	800	700	600	500	400	300	200	100	0																			
1800	1700	1600	1500	1400	1300	1200	1100	1000	900	800	700	600	500	400	300	200	100	0																									

ALEKSANDROV, N.N.; RYZHKOV, S.V.; SUKOVATYKH, L.S.; CHALISOV, I.A.;
CHESNOKOV, G.B.; KISILEVA, Ye.I.; BUENOVA, R.N.; RAMZEN-YEVDOKIMOV,
I.G.; SHAMOV, Vladimir Nikolayevich, prof., zas. deyatel' nauki, red.;
VOLKOV, L.F., red.; KOSTAKOVA, M.S., tekhn. red.; LEBEDEVA, Z.V., tekhn. red.

[Wounds of the skull and brain in acute radiation sickness] Raneniya
cherepa i golovnogo mozga pri ostroi luchevoi bolezni. Pod red. V.N.
Shamova. Leningrad, Medgiz, 1962. 174 p. (MIRA 15:3)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Shamov).
(RADIATION SICKNESS) (BRAIN—WOUNDS AND INJURIES)
(SKULL—WOUNDS AND INJURIES)

PHASE I BOOK EXPLOITATION SOV/6055

Aleksandrov, N. N., S. V. Ryzhkov, L. S. Sukovatykh,
I. A. Chalisov, G. B. Chesnokov, Ye. I. Kiseleva,
R. N. Bubnova, I. G. Ramzen-Yevdokimov

Raneniya cherepa i golovnogo mozga pri ostroy' luchevoy
bolezni (Cranial and Cerebral Injuries in Acute Radiation
Sickness). Leningrad, Medgiz, 1962. 176 p. 3500 copies
printed.

Ed. (Title page): V. N. Shamov, Acting Member of the Academy
of Medical Sciences USSR, Honored Scientist, Professor;
Eds.: Shamov, Vladimir Nikolayevich, Professor, and
L. F. Volkov; Tech. Eds.: M. S. Kostakova and Z. V. Lebedeva.

PURPOSE: This book is intended for surgeons in general and
neurosurgeons in particular, and may also be useful to phy-
sicians who might have to treat victims of atomic explosions.

COVERAGE: The book describes the results of numerous animal
experiments investigating important peculiarities of the
Card 1/6

Cranial and Cerebral (Cont.)

SOV/6055

clinical course, therapy, and outcome of infected cranial and cerebral injuries in subjects affected by penetrating radiation. Special features of the clinical phenomena and diagnostics of cerebral injuries and complications due to intracranial infection in acute radiation sickness are dealt with, and results of surgical and several kinds of antibiotic therapy are given. Basic methods for the use of antibiotics are presented. In the experiments, cranial and cerebral injuries were infected by cultures of suppurative infection-producing agents, bone splinters were left in the wounds, and primary surgical treatment was delayed for three days after irradiation and injury. Even under these conditions, satisfactory therapeutic results were obtained. The experiments indicate the desirability of extending the indications for the use of primary blind sutures [pervichnykh glukhikh shvov]. This investigation of cranial and cerebral injuries combined with radiation effects was conducted at the Academy of Military Medicine of the Order of Lenin imeni S. M. Kirov by a collective of authors under the leadership of Doctor of Medical Sciences N. N. Aleksandrov. There are 850 references: 579 Soviet, 219 English, 29 German, 20 French, 1 Italian, 1 Swedish, and 1 Hungarian.

Card 2/6 2

DUBCOV, Yu.I.; BARYKIN, Ye.B.; CHESNOKOV, G.P.

Introducing new devices manufactured by the Kazan Recording
Instrument Plant. Biul. tekhn.-ekon. inform. Gos. nauch.-issl.
inst. nauch. i tekhn. inform. 18.no.10:30-31 0 '65.
(MIRA 18:12)

POKIN, G.V., Izah.; CHESNOKOV, G.V., master tsekha

Automatic measurement pulverized coal level in a boiler bin, Energetik.
13 no.7:8-9 J1 '65.
(MIRA 18:8)

CHEBNOV, I.

Economic council reorganizes automotive transportation units.
Avt. transp. 37 no.7:35-36 J1 '59. (MIRA 12:10)
(Tula Province--Transportation, Automotive)

CHESNOKOV, I. P.

"Welding the Component Parts of Electrical Radio Apparatuses," Gosenergoizdat, Moscow, 1951, 68 pages.

Chesnokov, I. P.

USSR/ Engineering - Welding

Card 1/1 Pub. 128 - 21/35

Authors : Chesnokov, I. P., Engineer

Title : The PTDS-700 semiautomatic machine for spot arc welding

Periodical : Vest. mash. 35/3, 67 - 69, Mar 1955

Abstract : A description is given of the construction and operation of the PTDS-700 semiautomatic spot arc welding machine. The description includes technical specifications and such features as the wiring, kind of current used, power feed of welding material, and which procedures to use for obtaining best results. Illustrations; diagram; table.

Institution :

Submitted :

SOV/137-58-10-21145

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 104 (USSR)

AUTHOR: Chesnokov, I. P.

TITLE: Automatic Assembly Welding in Manufacture of Electronic Equipment (Avtomaticheskaya svarka montazha pri izgotovlenii radioapparatury)

PERIODICAL: Tr. Gos. tsentr. n.-i. in-ta tekhnol. i organiz. proiz-va, 1957, Nr 1(5), pp 3-45

ABSTRACT: The author examines existing methods of assembling electronic circuits and components. It is shown that the employment of automatic carbon-arc welding (W) is possible and that the method is both reliable and economical. A saving of approximately 3.4 million rubles in wages will be achieved if 15% of wiring connections, required for the manufacture of apparatus in accordance with the 1960-plan, are executed with the aid of automatic W. A novel method proposed for wiring of circuits involves flash W of contact terminals by means of a carbon arc with a vibrating electrode. Technical specifications are given for the specialized equipment employed (ADSM-1 and KDSM-2 units developed by TsNIITOP) which

Card 1/2

SOV/137-58-10-21145

Automatic Assembly Welding in Manufacture of Electronic Equipment

makes it possible to mechanize the W process and organize production-line methods of assembling various component units of radio apparatus. A conveyor employed in W is described. Data obtained during operations involving conveyor-W of switch segments of PTP-1 switches reveal an 85-percent reduction in the amount of work required for this operation. It is noted that the quality of W is highly consistent. Component units most suited technologically for automatic W are analyzed and the practical value of the employment of engineering processes and apparatus which had been developed is stressed.

- | | | |
|-------------------------------------|-----------------------------|-------|
| 1. Electronic equipment--Production | 2. Arc welding--Performance | N. T. |
| 3. Carbon electrodes--Applications | | |

Card 2/2

CHESNOKOV, L. I.

CHESNOKOV, L. I. --"Effect of an Electric Field on Linear Velocity of Crystallization."
*(Dissertations For Degrees In Science and Engineering Defended
at USSR Higher Educational Institutions)(29) Min Higher
Education USSR, Odessa State U imeni I. I. Mechnikov, Odessa,
1955

SO:Knizhnaya Letopis' No 29, 16 July 1955

* For the Degree of Candidate in Physicomathematical Sciences

CHESNOKOV, L.I.

Category : USSR/Atomic and Molecular Physics - Statistical Physics
Thermodynamics

D-3

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 3454

Author : Chesnokov, L.I.

Title : Effect of Electrical Field on the Linear Speed of Crystallization of
Supercooled Solutions

Orig Pub : Sb. nauch. rabot. Belorus. politekhn. in-ta, 1956, vyp. 55, 136-145

Abstract : The temperature curve of a linear velocity of crystallization of salol placed in a constant electric field of intensity on the order of 10^4 volt/cm, shifts towards the higher temperatures. The cause of the shift must be considered to be the increase in the activation energy of the molecules of the solution. The effect of an alternating electric field on the linear speed of crystallization manifests itself in a shift of the temperature curve towards lower temperatures. The shift depends on the frequency. The effect is caused by the reduced activation energy of the molecules of the solution and by an increase in the specific perimetric energy at the crystal-solution boundary. At audio frequencies and at electric field intensities on the order of 10^4 volt/cm, both

Card : 1/2

CHE SNOKEY L.I.

24 (0) PHASE I BOOK EXPLORATION SOV/3371

Minsk. Belorusskiy politicheskii institut

Sbornik nauchnykh rabot. Vyp. 60: Seriya fiziko-matematicheskaya (Collected Scientific Works. Nr 60: Physics and Mathematical Series) Minsk, 1997. 167. Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Ministerstvo vysshego obrazovaniya SSSR.

Tech. Ed.: S. Kh. Pezina; Editorial Board: N. A. Bessonov, Docent, Candidate of Physical and Mathematical Sciences (Resp. Ed.); M. V. Popova, Docent, Candidate of Physical and Mathematical Sciences; N. V. Afanas'yev, Docent, Candidate of Physical and Mathematical Sciences; and L. I. Chesnokov, Docent, Candidate of Physical and Mathematical Sciences (Resp. Ed. for this Number).

PURPOSE: This book is intended for students of the physical and mathematical sciences, collection of 19 articles on mathematics, mechanics, and theoretical mechanics, prepared by members of the Belorusskiy politicheskii institut imeni I. V. Stalina (Belorussian Polytechnic Institute imeni I. V. Stalin) and other scientists. The mathematical material includes an analysis of problems relating to the theory of univalent functions of a complex variable, the boundary problem in the theory of vibrations, and a monograph for the run-off of spring floods. The experimental works include studies of the electrocorrosion process, activation from salts, abrasive polishing of metals, and the distribution in the fracture of materials. The elastic properties of polymers under plastic deformation. References follow the individual articles.

8. Lavants, I. M., and M. A. Zhukharovich. Simplifying the technique of approximate calculation of definite integrals by formulae of numerical quadrature 56
9. Kheyman, V. B. Monograph for the Formula of G. M. Alekseyev for Calculating the Maximum Run-off of Spring Floods 69
10. Afanas'yev, M. V., A. M. Dashkevich, and A. E. Shukharovich. On the Efficiency of the Electrocorrosion Process 73
11. Afanas'yev, M. V., M. B. Khmelevsky, and V. A. Frankuk. About the Disperse Phase of Metal During High-Voltage Spark Discharge in a Gaseous Medium 82
12. Chesnokov, L. I. Effect of an Electric Field on the Formation of Crystallization Centers in Supercooled Melt 98
13. Chesnokov, L. I. Temperature Versus Activation Energy of Supercooled Molecules of Salol and Bzotol Melts 106
14. Bessonov, N. A. Relationship Between the Work, Heat, and Absorbed Energy in the Abrasive Wear of Rock Salt Crystals 116
15. Abgaryan, D. A., and M. A. Bessonov. Effect of Surface Energy on the Abrasive Wear of Crystals 125
16. Opeyko, P. A., Corresponding Member, AS BSSR, Professor, Doctor of Technical Sciences. Reducing Equations of Plane Free Motion to Homogeneous Equations and Proving the Theorem of the Minimum Sum of Moments of Force Acting on a Plate Lying on a Rough Plane 131
17. Opeyko, P. A., Corresponding Member, AS BSSR, Professor, Doctor of Technical Sciences. On the Minimum Sum of Moments of Force Acting on a Caterpillar Tractor in a Static State of Turning 139
18. Grietun, A. M. Investigation of Stresses in the Frame of a MAZ-525 Automobile 141
19. Michiporovich, P. V. Studying the Elastic Behavior of a Body During Plastic Deformation 147.4

CHESNOKOV, L.I.

Determination of the specific surface energy at the crystal -
melt interface for salol and betol. Zhur. fiz. khim. 36 no.3:
599-601 Mr '62. (MIRA 17:8)

CHESNOKOV, L.I.

Determination of the activation energy of viscosity in some metallic melts. Zhur. fiz. khim. 39 no.3:699-703 Mr '65. (MIRA 18:7)

1. Belorusskiy politekhnicheskii institut, Minsk.

CHESNOKOV, I.I.

Applicability of a fluctuation formula for linear crystallization
rate to crystal growth in a supercooled salol melt. Zhur. fiz.
khim. 39 no.5:1233-1235 My '65. (MIRA 18:8)

CHESNOKOV, L.N., mashinist-instruktor

How to detect electric circuit grounding in the TE3 diesel locomotive. Elek. i tepl.tiaga 3 no.2:37-39 F '59.

(MIRA 12:4)

1. Depo Petropavlovsk, Omskaya doroga.

(Electric currents--Grounding)

(Diesel locomotives--Electric equipment)

GOLYSHEV, M.I.; CHESNOKOV, M.I., red.; MUKHANOVA, M.D., tekhn. red.

[Wings strengthen in flight] Kryl'ia krepnut v polete.
Moskva, Voenizdat, 1963. 28 p. (MIRA 16:7)
(Flight training)

CHESNOKOV, M.M.

Some peculiarities in working deposits of granite extracted for
architectural and structural purposes. Trudy Inst.gor.dela no.2:
67-72 '55. (MLRA 9:3)

(Granite industry)

CHESNOKOV, M.M.

SUBJECT: USSR/Mining

127-10-13/24

AUTHORS: Mel'nikov, N.V., Corresponding Member, USSR Academy of Sciences;
and Chesnokov, M.M. Candidate of Technical Sciences.

TITLE: Safety Problems in Open Mines (Voprosy besopasnosti na otkry-
tykh rasrabortkakh)

PERIODICAL: Gornyy Zhurnal, 1957, #10, pp 56-60 (USSR)

ABSTRACT: The author analyzes statistics of traumatic injuries in mines
of some western countries and states that the number of acci-
dents in open mines is considerably lower than in underground
mining.

Not citing any definite figures about traumatic injuries in
the USSR, the author mentions that fatal injuries occur in the
open mines of all branches of industry, and most of them occur
in the open mines of the coal and metallurgical industries.

About 75 % of all fatal accidents happened because of the
violation of safety regulations, 15.1 % were due to cave-ins
and falling of coal, ore or rock lumps, and 8.6% were due to
faulty tools, etc.

Card 1/2

~~CHESNOKOV, Mitrofan-Mitrofanovich; MEL'NIKOV, N.V.,~~ otvetstvennyy red.;
~~NIKOLAYEVA, I.N.,~~ red. izd-va

[Quarrying granite] Razrabotka granitnykh mestorozhdenii. Moskva,
Izd-vo Akad. nauk SSSR, 1958. 142 p. (MIRA 11:6)

1. Chlen-korrespondent AN SSSR (for Mel'nikov)
(Granite industry)

SOV-127-58-10-27/29

AUTHORS:

Mel'nikov, N.V., Corresponding Member of the AS USSR;
Krasnikov, A.S., Nikonov, G.P., Potapov, M.G., Simkin, B.A.
and Chesnokov, M.M., Candidates of Technical Sciences and
Belyayev, A.A., Mining Engineer

TITLE:

B.P. Bogolyubov and B.P. Yumatov, "Mining Machines" (B.P.
Bogolyubov i B.P. Yumatov, "Gornyye mashiny")

PERIODICAL:

Gornyy zhurnal, 1958, Nr 10, pp 78-79 (USSR)

ABSTRACT:

This is a review of the above mentioned book.

1. Mining industry--Equipment 2. Literature--USSR

Card 1/1

MEL'NIKOV, Nikolay Vasil'yevich; CHESNOKOV, Mitrofan Mitrofanovich,
kand.tekhn.nauk; ZHUKOV, V.V., red.izd-va; ALADOVA, Ye.I.,
tekhn.red.; LOMILINA, L.N., tekhn.red.

[Safety engineering in strip mining] Tekhnika bezopasnosti
na otkrytykh gornykh rabotakh. Moskva, Ugletekhizdat, 1959.
421 p. (MIRA 12:?)

1. Chlen-korrespondent AN SSSR (for Mel'nikov).
(Strip mining--Safety measures)

CHESNOKOV, M.M., kand. tekhn. nauk

~~New machinery for open-cut mining of mineral raw materials.~~

~~Stroi. mat. 5 no.6:20-22 Je '59.~~

(MIRA 12:8)

(Mining machinery)

ZAYTSEV, A.P., red.; BORZOV, K.V., red.; BOGUSLAVSKIY, Yu.K., red.;
BELOUSOV, V.G., red.; VODAKHOV, L.A., red.; IZRAITEL', S.A., red.;
KOL', A.M., red.; LISTUK, S.S., red.; MOISEYEV, S.L., red.;
MEL'NIKOV, N.V., red.; MOROZOV, V.P., red.; MUDROV, P.A., red.;
POLYAKOVA, Z.K., red.; PODERNI, Yu.S., red.; POLESIN, Ya.L., red.;
POKHROVSKIY, L.A., red.; SLASTUNOV, V.G., red.; SKURAT, V.K., red.;
STRUNIN, M.A., red.; SOKOLOVSKIY, M.M., red.; FEOKTISTOV, A.T.,
red.; CHESNOKOV, M.M., red.; SHUKHOV, A.N., red.; YAMSHCHIKOV,
S.M., red.; BYKHOVSKAYA, S.N., red.izd-va; BERESLAVSKAYA, L.Sh.,
tekhn.red.

[Unified safety regulations in open-cut mining] Edinye pravila
bezopasnosti pri razrabotke mestorozhdenii poleznykh iskopaemykh
otkrytym sposobom. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po
gornomu delu, 1960. 61 p. (MIRA 13:7)

1. Russia (1917- R.S.F.S.R.) Gosudarstvennyi komitet po nadzoru
za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru.
(Strip mining--Safety measures)

KUKUNOV, Ivan Mikhaylovich; CHESNOKOV, M.M., kand.tekhn.nauk, nauchnyy
red.; GOMOZOVA, N.A., red.izd-va; TEMKINA, Ye.L., tekhn.red.

[Working of nonmetallic mineral deposits; special course]
Razrabotka mestorozhdenii nerudnykh iskopaemykh; spetskurs.
Moskva, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.mate-
rialam, 1960. 235 p. (MIRA 13:12)
(Nonmetallic minerals) (Quarries and quarrying)

NIKITIN, Vladimir Sergeyevich, kand. tekhn. nauk; CHESNOKOV, Mitrofan Mitrofanovich, kand. tekhn. nauk; DIDKOVSKIY, D.Z., red. izd-va; SABITOV, A., tekhn. red.; BOLDYREVA, Z.A., tekhn. red.

[Control of dust and gases in open mine pits] Bor'ba s pyl'iu i gasami na otkrytykh razrabotkakh. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 107 p. (MIRA 14:6)
(Mine dusts) (Mine gases)

MEL'NIKOV, Nikolay Vasil'yevich; KOSYREV, Vladimir Ivanovich, gornyy inzh.;
ROSTOVTSEV, Aleksandr Fedorovich, gornyy inzh.; CHESNOKOV, Mitrofan
Mitrofanovich, kand. tekhn. nauk; BYKHOVSKAYA, S.N., red. izd-va;
PROZOROVSKAYA, V.L., tekhn. red.; KONDRAT'YEVA, M.A., tekhn. red.

[Stripping systems] Sistemy otkrytoi razrabotki; spravochnoe posobie.
Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 373 p.
(MIRA 14:12)

1. Chlen-korrespondent AN SSSR (for Mel'nikov).
(Strip mining)

MEL'NIKOV, Nikolay Vasil'yevich, akademik; SIMKIN, Boris Aleksandrovich, kand. tekhn. nauk; DEMIDYUK, Grigoriy Prokop'yevich, kand. tekhn. nauk; VINITSKIY, Konstantin Yefimovich, kand. tekhn. nauk; STAKHEVICH, Yekaterina Borisovna, inzh.; KRASNIKOV, Aleksey Sergeyevich, kand. tekhn. nauk; CHERNEGOV, Yuriy Aleksandrovich, inzh.; POTAPOV, Mikhail Gennad'yevich, kand. tekhn. nauk; CHESNOKOV, Mitrofan Mitrofanovich, kand. tekhn. nauk; NURMUKHAMEDOVA, V.F., red. izd-va; SHKLYAR, S.Ya., tekhn. red.

[Foreign technique of open-pit mining] Tekhnika otkrytykh gornykh rabot za rubezhom. Moskva, Gosgortekhnizdat, 1962. 379 p.
(MIRA 16:1)

(Strip mining)

VASILEVSKIY, V.V., inzh.; SHPANOV, I.A., arkhitektor; CHESNOKOV, M.M.,
kand.tekhn.nauk; MITROPANOV, G.K., inzh.

Make fuller use of natural resources of ashlar and trim stone.
Stroi.mat. 8 no.10:32-33 0 '62. (MIRA 15:11)
(Building stones)

CHESNOKOV, M.M., kand.tekhn.nauk

Conference on blasting. Gor. zhur. no.12:60-62 D '62.
(MIRA 15:11)

1. Institut gornogo dela im. A.A. Skochinskogo.
(Blasting)

CHESNOKOV, Mitrofan Mitrofanovich; SHAVRINA, R.F., red.; GERASIMOV,
V.F., tekhn. red.

[Hydraulic cutting of natural stone with high speed thin
water jets] Gidravlicheskoie rezanie prirodnoio kamnia ton-
kimi struiami vody vysokoi skorosti; kratkii nauchnyy ot-
chet. Moskva, 1963. 50 p. (MIRA 16:10)

1. Moscow. Institut gornogo dela imeni A.A.Skochinskogo.
(Stonecutting)

MEL'NIKOV, Nikolay Vasil'yevich, akademik; ~~CHESNOKOV, Mitrofan~~
~~Mitrofanovich~~, kand. tekhn.nauk; ~~NURMUKHAMEDOVA, V.F.~~,
red.izd-va; SABITOV, A., tekhn.red.

[Safety measures in open-pit mining] Tekhnika bezopasnosti
na otkrytykh gornyykh rabotakh. Izd.2., perer. i dop. Mo-
skva, Gosgortekhnizdat, 1963. 382 p. (MIRA 17:2)

L 51855-65 FWT(m)/EWA(d)/EWI(t)/EWP(k)/EWP(b)/EWA(c) 1964 11 17
 ACCESSION NR: AP5017109 UR/0228 (64/02/015 11 17 1964)

AUTHOR: Semenov, V. M. (Candidate of technical sciences); Chesnokov, M. N.
 (Candidate of technical sciences); Zakharov, Yu. N. (Engineer)

TITLE: Breaking up rock with high-frequency currents 4 26

SOURCE: Stroitel'nyye materialy, no. 12, 1964, 9-11

TOPIC TAGS: structural mineral product, mining engineering, civil engineering

ABSTRACT: It is shown that non-metallic rocks may be destroyed by hf currents. The rocks are broken up without flying splinters and dust. The method described may be used for quarrying and processing of non-metalliferous structural materials both in open-pit conditions and at the construction points of road construction sites. Calculations show that the cost for breaking up the rock does not exceed 2.8 rub/m³ when the capacity of the installation is 28-30 m³/shift. The capacity of the installation in laboratory conditions comes to approximately 100 m³/shift. It is hoped that an industrial installation may be developed with a capacity of up to 100 m³/shift which would bring the cost of breaking up rock down to about 30 kp/m³.

Orig. art. has: 2 figures, 3 formulas, 2 graphs, 1 table.

Cord 1/2

L 51855-65

ACCESSION NR: AP5017109

ASSOCIATION: none

SUBMITTED: 00

NR REF SOV: 003

ENCL: 00

OTHER: 000

SUB CODE: MT, 00

JPRS

Card

$\frac{1-1}{2/2}$

CHESNOKOV, M.M., kand.tekhn.nauk

Special methods of strip mining with the purpose of preserving
the natural properties of the mineral. Nauch.sob.IGD 24:130-
144 '65. (MTRA 18:10)

MATUSHEVSKIY, Ye.V., inzh.; MALININ, M.S., inzh.; OSTROVETSKIY, R.M., inzh.;
FCMIN, A.V., inzh.; TSYMBAL, V.G., inzh.; CHESNOKOV, M.V., inzh.;
SHAMARAKOV, D.Ye., inzh.

Start of the K-200-130-1 turbine with PT-100 drum boiler from a cold
state. Elek. sta. 35 no.9:29-34 S '64.

(MIRA 18:1)

CHIKHACHEV, I.; CHESNOKOV, N., agitator, laureat Stalinskoy premii

The important thing is to keep in contact with life. Sov.
profsoiuzy 16 no.12:29-32 Je '60. (MIRA 13:6)

1. Zamestitel' predsedatelya moskovskogo savkoma zavoda "Serp
i molot" (for Chikhachev). 2. Brigadir brigady kommunisticheskogo
truda moskovskogo zavoda "Serp i molot" (for Chesnokov).
(Moscow—Steel industry) (Trade unions)

CHESNOKOV, N. A.

"Qualitative Varieties of Shoots from Potato Tubers," Agrobiol., No.4, 1948

Rostov Selective Exptl Station

BASHKIRTSEV, M.; CHESNOKOV, N.

Symposium on radiation protection and safety technique in the
extraction and treatment of radioactive materials. Atom.energ.
16 no. 4:381-382 Ap '64. (MIRA 17:5)

25026

S/057/61/031/007/007/021
B108/B209

26.2311

AUTHORS: Shirokov, M. F., Vaulin, Ye. P., and Chesnokov, N. A.
TITLE: Some experiments to steady plasma flow in a homopolar
PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 7, 1961, 802-805

TEXT: The authors studied the stream of an ionized gas in a homopolar (Fig. 1) at a pressure of $4 \cdot 10^{-1}$ mm Hg and in an external magnetic field of $H = 250$ oersteds. The magnetic field was parallel to the axis of the concentric cylindrical electrodes and perpendicular to the current density vector j . For the measurement of the velocity v , a rotary shaft was used, suspended on a thin thread (length $L = 10$ cm, radius $R = 1.25 \cdot 10^{-2}$ mm, torsion modulus $N = 6.5 \cdot 10^{11}$ dyne/cm²). Thin mica reeds of various width ($a = 0.2, 0.3, 0.4, 0.5, 0.7$ cm) and a length of $b = 4$ cm were fastened to the thin end of the shaft, perpendicular to the current. The mean velocity was obtained from the torques produced by the current and by the thread. The reed experiments made it possible to determine a maximum $a_m = 4$ cm,

Card 1/3

25026

S/057/61/031/007/007/021
B108/B209

Some experiments to steady ...

at and below which the current pinch, due to the insertion of the reed, does not interfere with the velocity measurement. When the plasma stream is laminar, the current density through the cathode is connected with the stream velocity by the relation $\frac{j_1 H}{c} = \frac{45 q v^2}{2 d R}$ (4); the ratio of the tube width to the cathode radius was $\frac{d}{r_1} = 0.67$; c is the resistivity coefficient,

q - the density of the gas. In the case of turbulent flow, the above relation has the form $\frac{j_1 H}{c} \approx \frac{0.3 q v^2}{R^{1/4} 2 d}$ (5). Applying the logarithm to

these relations, one obtains $\log v = \log I - \log \left(\frac{45 c \eta S_1}{2 d^3 H} \right)$ (6) for the laminar case and

$$\lg v = \frac{4}{7} \lg I - \frac{4}{7} \lg \left(\frac{0.3 c \eta^{1/4} S_1}{2 d^{1/4} H} \right), \quad (7)$$

Card 2/0 3

Some experiments to steady ...

25026
S/057/61/031/007/007/021
B108/B209

for the turbulent case, where $I = j_1 S_1$; S_1 - cathode area. For the laminar flow, a coefficient $c = \frac{10.2}{R_s}$ has to be used (Ref. 2: J. Schmiedel. Phys. Zs., 29, 593; 1938), where R_s is the Reynolds number of the reed in the stream. In the turbulent case, $c \approx 1$. The experimental results are in good agreement with the formulas for the turbulent and the laminar plasma stream, but considering that the Reynolds number $R_s < 2.5$, the flow has to be regarded as being laminar. There are 5 figures and 2 references: 1. Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Moskovskiy aviatsionnyy institut imeni Sergo Ordzhonikidze
Kafedra fiziki (Moscow Aviation Institute imeni Sergo
Ordzhonikidze, Department of Physics)

SUBMITTED: November 30, 1959

Card 3/3

CHESNOKOV, N. A., SHIROKOV, M. F., VAULIN, E. P. (Moscow)

"Experiments Related to the Acceleration of Ionized Gases (Gas-Discharge Plasma) by Electrodynamic Forces in a Special Test Arrangement."

report presented at the First All-Union Congress on Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb 1960.

ACC NR: AT7002905

SOURCE CODE: UR/0000/66/000/000/0070/0084

AUTHOR: Sakhiyev, A. S.; Stel'makh, G. P.; Chesnokov, N. A.; Bassel', A. B.

ORG: none

TITLE: Calculation of the particle evaporation process in a high temperature gas stream under non-adiabatic conditions

SOURCE: AN UkrSSR. Fizika goreniya (Combustion physics). Kiev, Izd-vo Naukova dumka, 1966, 70-84

TOPIC TAGS: plasma jet, metal powder, combustion, solid propellant, metal combustion, *POWDER METAL PRODUCTION, NONADIABATIC PROCESS*

ABSTRACT: Methods of producing ultrafine metal powders by injecting coarse powder into plasma jets have recently become of considerable interest. The heating, melting, and evaporation processes of the particles and important for the design of reactors. In the present study, an analysis was made of the melting and evaporation processes of metal particles in high-temperature plasma jets, and formulas were derived for calculating the time and path length required for melting and evaporation. Formulas for calculating the particle velocity during evaporation were also derived. Empirical and theoretical relationships are given for the temperature field in a cylindrical reactor into which an argon jet discharges. Orig. art. has: 40 formulas and 1 figure. [PV]

SUB CODE: 21,11/SUBM DATE: 12Sep66/ ORIG REF: 004/ OTH REF: 008

Card 1/1

UDC: none

~~CHESNOKOV, N.A.~~

Standard method for reproduction of kinematic viscosity units.
Standard and calibrating instruments. Trudy VNIIM no.19:45-67 '52.
(Viscosimeter) (MIRA 11:6)

CHESNOKOV N.A.

✓ 3261. DETERMINATION OF VISCOSITY AT LOW TEMPERATURES IN A FALLING BALL
VISCOMETER. Chesnokov, N.A. and Indrik, A.M. (Trud. Vsesoyuz. nauch.-
Issled. Inst. Metrolog. (Proc. Inst. Metrology, U.S.S.R.), 1954, (22), 117-126; FU
abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1955, (19), 44136).
Transformer oil behaved as a normal liquid at temperatures down to -45°C , while
liquid 1b0 (a mixture of transformer oil and lubricating oil) at -20°C and
below showed signs of structural viscosity and thixotropy. The signs were
inconsistency of viscosity determinations with different balls, and variation
in successive readings of the time of falling.

CHESNOKOV, N.A.

Determining the constant of the VU-type viscosimeter by
means of water and oil. Trudy VNIIM no.37:144-148 '59.
(MIRA 13:4)

(Viscosimeter--Testing)

S/589/62/000/062/003/011
E194/E136

AUTHORS: Stepanov, L.P., Stul'ginskaya, I.A., and Chesnokov, N.A.

TITLE: Dependence of the precision of measurements on the amount of liquid remaining on the walls of viscometer reservoirs

SOURCE: USSR. Komitet standartov, mer i izmeritel'nykh priborov. Trudy institutov Komiteta. no. 62(122). Moscow, 1962. Issledovaniya v oblasti izmereniy vyazkosti, plotnosti i massy. 29-32.

TEXT: The amount of liquid left behind in a viscometer reservoir is liable to be different from that which was left behind during the original calibration. The previous work on this subject, which has given rise to contradictory results, is reviewed. Tests were made with some hundreds of bulbs in five different sizes which, for the purpose of the experiments, were connected to capillaries by rubber tubing. The amount of liquid left adhering to the walls after tests, under various conditions corresponding closely to those of practical viscometry, was

Card 1/3

Dependence of the precision of ...

S/589/62/000/062/003/011
E194/E136

determined by weighing. The relative amount of liquid remaining in spherical reservoirs was found to be independent of their volume, within the range 3.3-15 cm³ and the viscosity of petroleum products in the range 0.1-13 cst. The error that results from neglecting differences in the amount of liquid adhering to the reservoirs is not more than 0.05% for fluids having a viscosity of up to 1 cS, and is approximately 0.1% for fluids with viscosities in the range 1-13 cst. However, for pressure-viscometers the measurements on a given liquid under different rates of flow may differ by as much as 3%. The experimental data obtained are represented by the following approximate formula:

$$\frac{\Delta V}{V} = A + \frac{B}{\tau} \quad (4)$$

where: V - reservoir volume; τ - draining time, seconds; and A and B - constants having the following values for spherical reservoirs in the range 3.3-15 cm³ and flow times of 100-1000 secs.

Card 2/3

Dependence of the precision of ... S/589/62/000/062/003/011
E194/E136

Table 2

	Viscosity of petroleum product, cst		
	0.11	1.07	13.2
A	0.0008	0.0021	0.007
B	0.23	0.77	3.4

There are 1 figure and 2 tables.

ASSOCIATION: VNIIM

SUBMITTED: February 16, 1961

Card 3/3

S/589/62/000/062/004/011
E194/E136

AUTHOR: Chesnokov, N.A.

TITLE: The limits of calibration constants of viscometers
having capillaries of different diameters

SOURCE: USSR. Komitet standartov, mer i izmeritel'nykh
priborov. Trudy institutov Komiteta. no. 62(122).
Moscow, 1962. Issledovaniya v oblasti izmereniy
vyazkosti, plotnosti i massy. 33-37.

TEXT: In the existing standard ГОСТ 33-53 (GOST 33-53)
capillary viscometers are characterized only by the nominal
capillary diameter. This specification is due for revision and
it would be better to characterize the viscometers by the
constants determined by the manufacturers. This would sometimes
necessitate changes in the method of defining manufacturing
tolerances and would also call for closer manufacturing tolerances.
It is important that viscometers of different nominal rating should
have different calibration constants. At present the manufacturing
tolerances for different capillary diameters overlap, so that the

Card 1/3

The limits of calibration constants ... S/589/62/000/062/004/011
E194/E136

calibration constants of instruments with nominally different capillary diameters also overlap. By way of example, the volume of liquid flowing in a Pinkevich standard viscometer is calculated with allowance for the usual manufacturing tolerances.

Calculations are then made of the influence on instrument calibration constant of variations in capillary diameter and length and bulb volume. In a particular case for a capillary of 0.6 mm diameter, 90 mm long and bulb volume of 3.5 cm³, capillary diameter tolerance can cause the constant to vary by about $\pm 30\%$, the bulb volume tolerance by about half of this value, and the capillary length tolerance by only $\pm 2\%$. Nominal minimum and maximum values of instrument constants for viscometers of different sizes are then calculated on the basis of existing manufacturing tolerances and the results are tabulated. The effect is then studied of decreasing the tolerances as follows: for capillaries of 0.4-1.2 mm diameter to ± 0.03 mm and for larger capillaries to ± 0.05 mm; for bulb volume to ± 0.3 cm³. These tolerances result in a clear distinction between the constants of viscometers

Card 2/3

The limits of calibration constants... S/589/62/000/062/004/011
E194/E136

with different diameters. It is recommended that the viscometer bulb should be specified in terms of volume rather than of linear dimensions, and minor design changes are suggested. The work described relates particularly to manufacturing conditions at the "Druzhnaya Gorka" Works.
There are 4 tables.

ASSOCIATION: VNIIM

SUBMITTED: February 14, 1961

Card 3/3

S/589/62/000/062/005/011
E194/E136

AUTHOR: Chesnokov, N.A.

TITLE: Pipette viscometers and their checking

SOURCE: USSR. Komitet standartov, mer i izmeritel'nykh priborov. Trudy institutov Komiteta. no. 62(122). Moscow, 1962. Issledovaniya v oblasti izmereniy vyazkosti, plotnosti i massy. 38-43

TEXT: Pipette viscometers are capillary instruments which are used in the cellulose industry to determine the viscosity of cuprammonium solution of cellulose and solution of cellulose xanthogenate according to standard method GOCT 6844-54 (GOST 6844-54). Great scatter of results having been found with these viscometers, the Institut tsellyulozno-bumazhnoy promyshlennosti (Institute of the Cellulose-Paper Industry) requested VNIIM to check this type of viscometer. The present article describes the work done to this end. The viscometers are made with nominal diameters of 1.0, 1.2 and 1.5 mm. Errors arise from differences in the shape of the receiver vessel according to the type of cellulose being tested. The standard immersion is not great
Card 1/2

Pipette viscometers and their

S/589/62/000/062/005/011
E194/E136

enough so that air can be drawn into the pipette during filling. In determining the kinematic viscosity it is currently recommended to take the density of the solution from the tables; however, it is more accurate to determine it each time. The tolerance of the test temperature of 20 °C should be reduced from $\pm 0.2^\circ$ to $\pm 0.1^\circ$. Sulphuric acid solutions which have been used for calibrating viscometers are not sufficiently viscous and should be replaced by petroleum-based calibrating fluids, provided by VNIIM, of such viscosity that the flow time during calibration is not less than 200 secs. The viscometer constants should be such that the test time with cellulose is at least 150 secs. It is best to avoid having the outflow tube in contact with the liquid surface in the receiver, as is recommended in the standard method, and to discharge to air.

There are 3 figures and 1 table.

ASSOCIATION: VNIIM

SUBMITTED: May 20, 1961

Card 2/2

S/589/62/000/062/006/011
E194/E136

AUTHOR: Chesnokov, N.A.

TITLE: The viscosity of aqueous solutions of mineral salts

SOURCE: USSR. Komitet standartov, mer i izmeritel'nykh priborov. Trudy institutov Komiteta. no. 62(122). Moscow, 1962. Issledovaniya v oblasti izmereniy vyazkosti, plotnosti i massy. 44-51.

TEXT: A systematic study of the viscosity of aqueous solutions of a large number of mineral salts at 20 °C over a wide range of concentration is described. Three viscometers were used with capillaries of about 0.5 mm diameter. The repeatability was within 0.05%, at least ten repeat measurements having been made. The standard error of the determinations did not exceed 0.025%. Results are given for halides, nitrates, carbonates, sulphates, and phosphates of sodium, potassium and ammonium. It was found that the cations reduce the viscosity of water in the order $\text{Na}^+ > \text{NH}_4^+ > \text{K}^+$. For a given cation the anions reduce the viscosity in the following order:
Card 1/2

The viscosity of aqueous solutions... S/589/62/000/032/006/011
E194/E136

$\text{PO}_4'' > \text{HPO}_4'' > \text{H}_2\text{PO}_4' > \text{CO}_3'' > \text{HCO}_3' > \text{SO}_4'' > \text{Cl}' > \text{NO}_3' > \text{BR}' > \text{I}'$. Anomalous viscosity (i.e. less than that of water) is observed for potassium and ammonium chlorides, bromides, iodides and nitrates. Chlorides and nitrates of magnesium, calcium, strontium and barium were then examined. Taking the cations in order of viscosity, the highest first, they are: $\text{Mg}'' > \text{Ca}'' > \text{Sr}'' > \text{Ba}''$. The greater the atomic weight of the element, the lower the viscosity of the solution. Salts of cobalt and nickel behave much like the others, i.e. nitrate solutions have lower viscosities than chloride solutions. Copper behaves similarly to the alkaline metals, i.e. the sulphate solutions are more viscous than the chloride solutions, which are more viscous than the nitrate solutions. Explanations that have been offered for the influence of mineral salts on viscosity are reviewed. It is concluded that the viscosity of aqueous solutions of mineral salts is influenced by both the cations and the anions, and that for salts which reduce the viscosity of water the influence of the cations preponderates. Nitrates of barium and lead reduce the viscosity of water. There are 10 tables.

Card 2/2 ASSOCIATION: VNTIM. SUBMITTED: February 16, 1961.

CHESNOKOV, N.A.

Make the method for determining kinematic viscosity more precise.
Standartizatsiia 25 no.1:34-35 Ja '61. (MIRA 14:3)
(Viscosimetry)

SOROKOUMOVA, T.I.; CHESNOKOV, N.A.

Calibration liquids and the control test of viscosimeters
having the diameters of capillaries above 2 mm. Trudy inst.
kom. stand., mer i izm. prib. no.68:80-85 '63.

(MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii
im. D.I. Mendeleyeva.

STUL'GINSKAYA, I.A.; CHESNOKOV, N.A.

Viscosity of water within a temperature range of 0 to
60°C. Trudy inst. Kom. stand., mer i izm. prib. no.68:
100-106 '63. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii
im. D.I. Mendeleyeva.

L 29854-66 EWT(1)/ETC(f) NW

ACC NR: AP6012681

SOURCE CODE: UR/0170/66/010/004/0508/0512

AUTHOR: Stel'makh, G. P.; Chesnokov, N. A.; Sakhiyev, A. S.

69
B

ORG: none

TITLE: Characteristics of heat transfer in the channel of a sectional electric arc gas heater

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 10, no. 4, 1966, 508-512

TOPIC TAGS: heat transfer, electric arc, argon, heating

ABSTRACT: The experimental apparatus, shown in the article, has a tungsten cathode with a diameter of 10 mm, auxiliary and main anodes, and an intermediate section cooled with water. The ratio of the length of the channel to its diameter is equal to 8. The heater operates on direct current and its power is designed for 100 kilowatts; the working gas is argon. In the tests, the ranges of the parameters were between the following limits: argon flow rate, 1-3.7 grams/sec; pressure, 4×10^3 - 200×10^3 newtons/m²; power, 25-50 kilowatts; current strength, 300-700 amp; voltage, 70-120 volts; and, temperature of gas at outlet from channel, 10,000-13,000°K. Initial data and experimental data are shown in tabular form. On the basis of the experimental results the

Card 1/2

UDC: 536.242

L 29854-66

ACC NR: AP6012681

following empirical expression was obtained:

$$St = 0.7 Kn^{0.25} \quad (2)$$

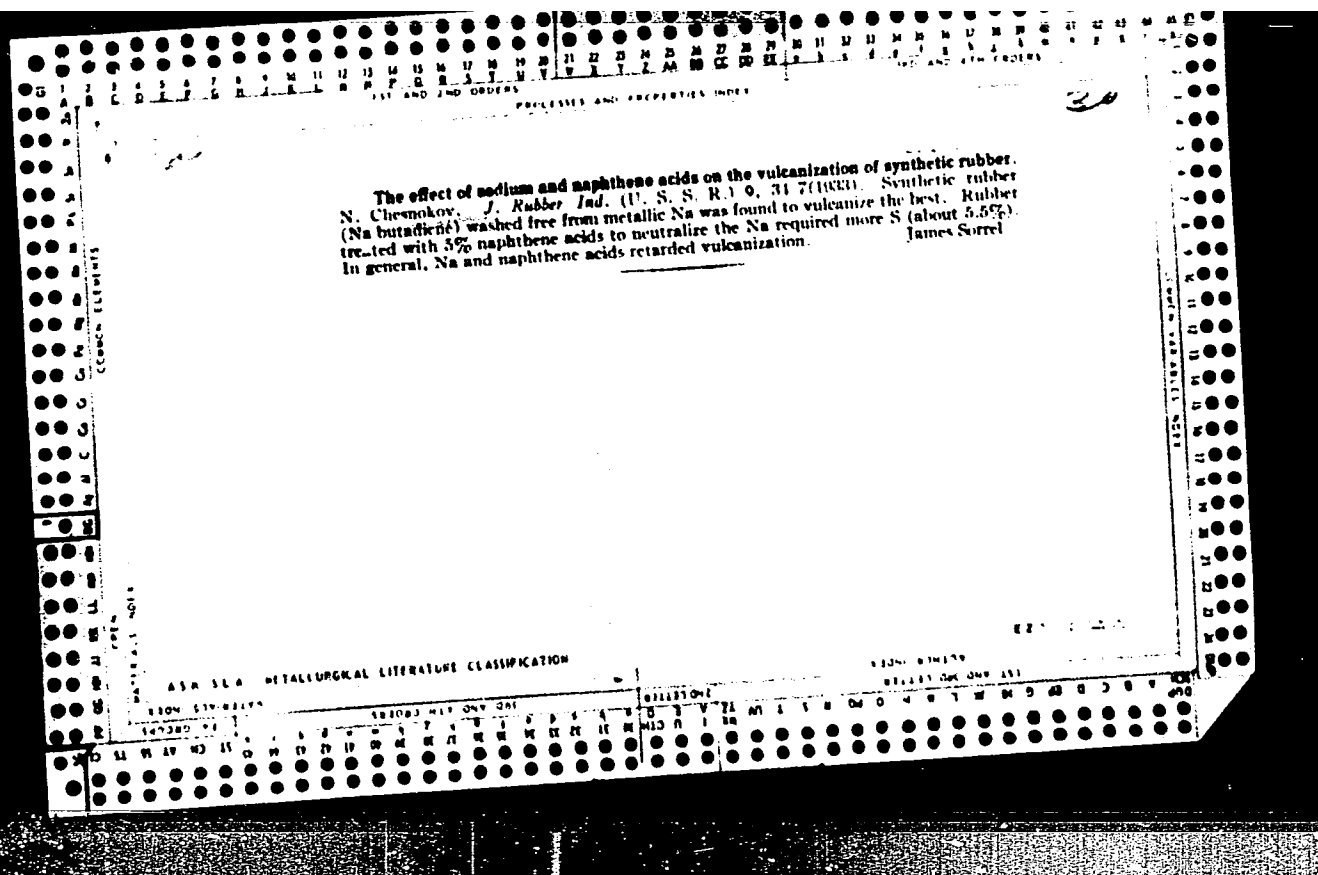
$$300 < Re < 1500; 0.002 < Kn < 0.06; 0.1 < M < 1.0.$$

This expression can be used for a qualitative evaluation of the effect of a decrease in pressure on the heat transfer rate in electric arc gas heaters with sectional channels, and for an approximate quantitative evaluation of heat transfer in similar electric arc heaters with a change of pressure in the system. Orig. art. has: 2 formulas, 2 figures and 1 table.

SUB CODE: 13,20/ SUBM DATE: 07Oct65/ ORIG REF: 008/ OTH REF: 001

Card

2/2 *fv*



[illegible]

